**Ham Radio Rocks!**

# The Mt. Vernon Amateur Radio Club

## October, 2010 Newsletter

**Meetings are held the 2nd Monday of each Month at 7:00 P.M. at the Knox County Chapter of the American Red Cross, 300 N. Mulberry Street, Mt. Vernon, Ohio**

**Local Ham Community**

**K8EEN Repeater: 146.790 Mhz (-600 Khz With PL of 71.9 Hz)**
**KD8EVR Repeater: 442.100 Mhz (+5Mhz With PL of 71.9 Hz)**

**Sunday Night ARES Net at 9:00 P.M. on The K8EEN Repeater**
**Wednesday Night Social Net at 9:00 P.M. on the KD8EVR Repeater**

# 2 Meter Repeater Up and Running

Members will be happy to know that the 2 meter repeater, K8EEN/R is back on the air and working very nicely.

Work on the water tower was completed in late September. The repeater was put back in service by Arlin Bradford (KD8EVR), Ann Bradford (KD8LFH), Brandon Hunt (KD8LPP), and Don Russell (W8PEN),

Many thanks go to Arlin's antenna crew who removed our antenna and cable for the duration of the water tower refurbishing, and then put it all back together aftwards. That would have been a major project for the club to have had to do.

Due to big time Ham ingenuity, the County was never without a working 2-meter repeater. Arlin had tied in links to his 440 Mhz repeater, KD8EVR/R, that allowed us to use both repeaters simultaneously. Yes, coverage was not as good as the water tower. It was not all because of location though. There were some technical issues that we decided to ride out until our regular repeater was back on the air.

The substitute repeater did an adequate job maintaining our presence. But it is really nice to have our repeater back on the air!

As trustee of the repeater, it is nice to know that we have a home for the repeater for the next 10 to 15 years. We need to remember the generosity of the City of Mt.

***The next meeting of the Mt. Vernon Amateur Radio Club will be October 11, 2010.***

******SPECIAL TIME OF 6:00 PM ******

***We are having a cookout for our club meeting! This meeting will be held at Bennett Park in Apple Valley. Please check the last page of the Newsletter for more information and directions.***

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***Please remember to check into the long running Sunday Night ARES net at 9:00 P.M. on the K8EEN 2-meter Repeater.***

***Also check out the UHF net on the KD8EVR Repeater. This net runs each Wednesday at 9:00 P.M. and is a social net. Please join us for the fun of it.***

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***Every Wednesday at 5:00 PM, MVARC club members meet at Wendy's, 522 South Main Street, Mt. Vernon, Ohio. Dinner Coordinator Dick Huggins, N8RDH, reports good turnouts for this event. Come share dinner with friends, or make new friends, by attending one or all of these events.***

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***Join MVARC club members every second Saturday of the month for breakfast. Breakfast Coordinator Arlin Bradford, KD8EVR, reports good turnouts for this event.***

******The next Breakfast will be October 9, 2010 at 9:00 AM at Allison's Finer Diner, 11587 Upper Gilchrist Road,* Mt. Vernon, Ohio*****

***There will be a Fox Hunt following this breakfast. Please check the Newsletter for more information of this fun event.***

Vernon and Mayor Richard Mavis and continue to provide the City and County with our weather nets and any needed communications help during disaster events. The repeater is indeed a vital link for ARES communications.

Please check out Ann Bradford's (KD8LFH) pictures at the end of the Newsletter.

# Announcing the 2010 Fall Fox Hunt

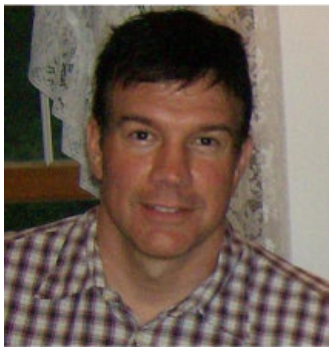
**By Matt Sturgeon, KD8NGT**

A fall foxhunt has been scheduled for October 9th. The hunt will begin after a 9AM breakfast at Allison's Finer Diner located at 11587 Upper Gilchrist, Mount Vernon. I anticipate the start time to be on or slightly after the 10 o'clock hour depending on how quickly everyone finishes their breakfast.

The Fox Hunt is open to all hams.

# A Wire, a Battery, a Radio, and a Computer?

**By Mark Bisenius, AC8FV**



Go back and read Is Knox County Ready For Digital? by Don Russell, W8PEN, in the November 2009, December 2009, and February 2010 Newsletters. It's an excellent three-part series on the world of digital EmComm.

Don points out that even though digital would be useful, "when all else fails" we should never run computers and TNCs off of our emergency batteries He's right. Does that mean we can forget about ever having digital data capabilities to offer our served agencies when the power goes out? I thought so--but not anymore.

The ASUS Eee PC Seashell 1001P-PU17-BK 10.1-Inch Black Netbook (Up to 11 Hours of Battery Life), $299.99, is able to access the internet over Wi-Fi for 8 hours--a full workday.

Other brands have followed suit, with the ASUS Eee PC

**The Mt. Vernon Amateur Radio Club**

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**Members are encouraged to send articles pertaining to Amateur Radio, with an emphasis on local activity, equipment reviews, and personal experiences to the Newsletter Editor. Articles are due on the Sunday before the first Monday of the month.**

**Newsletter Editor:** **Don Russell, W8PEN**
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**Phone: 740-397-0249**

Seashell 1005PE-PU17-BK 10.1-Inch Black Netbook (Up to 14 Hours of Battery Life), $376.93, now able to access the internet over Wi-Fi for an incredible 12 hours.
That means with new, fully charged netbooks, we could perform digital message handling for 8 to 12 hours without ever hooking them up to our emergency batteries. That's a lot of message traffic.

Now let's get to the fun stuff. Fldigi is a digital modem program that uses a computer's sound card to connect to a radio, instead of using a TNC. It's the heart of the Narrow Band Emergency Messaging System (NBEMS) software, and it runs most of the amateur radio digital modes.

MT63 is a particularly robust digital mode, using 64 tones to represent each character at several places, both in frequency and in time, so that it can withstand dropouts from fading, and noise bursts from lightning, without errors. It's an audio tone, similar to a fax, or to dial-up internet access over a phone line. But instead of using phone lines, it's transmitted over radio.

Military Affiliate Radio Service (MARS) has been getting a 4:1 reduction in transmit time for message traffic, by activating a Voice Net with a Net Control Station on one of their HF frequencies, and then using MT63 for digital message handling on another frequency, at the much lower power levels required for digital modes.

NBEMS (N-Beams) can be downloaded at no cost, and run from a USB memory stick containing all digital message traffic and the Fldigi log, on any Windows, MAC OS X, or Linux computer with a USB port, under a GNU General Public License, including the computers of served agencies such as the Red Cross, or computers in an EOC, thereby pooling all computer resources.

Flmsg formats and can print digital messages as either an ARRL Radiogram, or as an ICS-213 General Message Form. Flwrap uses a checksum to verify that critical messages contain no errors. Both are integrated into Fldigi.

To send a message, Copy any text on your computer screen, from any file, any email including Winlink2000, or a base64 encoded JPEG image, and Paste it into the Fldigi Transmit Window. Or you can type in a message.

On the receiving computer, which is also running Fldigi, the text scrolls in the Receive Window. You can then Copy any text from the Receive Window, and Paste it into any file, such as a text file, a new email including Winlink2000, or a base64 JPEG image decoder.

So how do we connect the radio to the computer and avoid draining our emergency batteries with a TNC? As Don explains how to do in the December 2009 Newsletter, we can build or buy cable connectors, and we can homebrew a push-to-talk (PTT) circuit, or use VOX if we have it, or use a footswitch.

Or we can buy a USB powered external sound card, such as the Tigertronics SignaLink, $99.95; or the Rigblaster Nomic (No mic), $59.95. But MT63 doesn't need a physical connection between the computer and the radio. What?

The connection can be made using acoustic coupling. The MT63 audio tone generated by Fldigi plays out of the speakers of the transmitting computer, and into the mic of a handheld, as you hold down the PTT switch.

It's then transmitted over 2m or 70cm FM simplex--or through a 2m or 70cm analog FM voice repeater--to the receiving handheld, playing out of its speaker, and into the mic of the receiving computer, where the text scrolls across the Fldigi screen.

I couldn't believe it either. Bang on the desk. Talk into the mic. No errors. Just perfect copy at over 200 wpm.

Western PA ARES has been a pioneer--testing and implementing MT63 for EmComm use on FM in the WPA Section, using acoustic coupling.

Every Club member has a radio and a computer, so every one of us can begin using MT63 without spending a dime. It's no more difficult than setting up our Field Day Network Log from N3FJP.

We'll go through a step-by-step Quick Start Guide in a future article.

# One of the Dumbest Things I've Ever Done in Ham Radio

**By Dan Romanchik, KB6NU**

Mark, W8MP, and I often argue about what's dumber—his county hunting or my collecting QSL cards from stations whose call signs spell words. It's one of those arguments that will never be won. When you get right down to it, they're both pretty dumb.

Well, one Wednesday morning, I got a call from Mark. He asked, "Hey, want to do something really dumb tonight?" When I asked what he had in mind, he replied, "Well, one of my county hunter friends, Tim, W8JJ (he's the guy looking nervous in the black cap below), claims to have

confirmed all 3,077 counties. He needs at least two General Class (or higher) hams to check his QSL cards and sign off on his application for the USA-CA award sponsored by CQ magazine. I guarantee that this will be one of the dumbest things that you ever do in ham radio. I also guarantee that it will be a lot of fun."

After a fine salmon dinner with some very chewy noodles (that Mark claims his son, KD8EEH insisted that he make), we cleared the table, and Tim got out his box of cards. Mark then explained how we should proceed. I was kind of curious about this, as it's clearly impossible to check all 3,077 QSOs in a single evening.

Basically, what the two checkers are supposed to do is to check random contacts until they are satisfied that the applicant does indeed have a QSL from all 3,077 counties. To select the contacts, you might choose counties where you lived, or counties that you have visited. I hit on the idea of having Tim produced the confirmations of all 16 counties in Massachusetts. Clark, who is more familiar with which counties are the most difficult to confirm, asked Tim to produce cards from some rare counties in Colorado and Hawaii.

Above all, though, the idea is to give the applicant as much grief as possible during the process.

Mark came up with the idea of calling several county hunters that he had phone numbers for and asking them to verify in their logs some of the QSOs that Tim was claiming. He first phoned Jim, N9JF, and we asked him about a 44 report that he'd given Tim seven years ago. He wasn't near his logbook, but he said that he did remember that contact and even rattled off the county (Wahkiakum, WA)!

Next, Mark phoned Guff, KS5A, who confirmed a contact, but was off by almost seven minutes. A long discussion ensued regarding the details of how a mobile logs contacts while out driving. In the end, we accepted the seven-minute discrepancy.

Finally, Mark phoned Larry, W0QE, to confirm a few of the MRCs that Tim had from him. (MRCs are records of multiple contacts. Using them instead of QSL cards makes the process of managing all these QSLs a lot easier.) Mark joked that it looked like one of the MRCs had a forged signature. Larry replied that all of his MRCs are stamped.

"Aha," Clark exclaimed, "this MRC doesn't have a stamp!"

I don't know what was going through Tim's mind at this point, but it probably wasn't good. Larry then explained that he probably sent out that MRC before he got the stamp. When we confirmed those dates, I think Tim breathed a little easier.

In the end, Clark and I signed off on Tim's application. And, even though Mark and I joke about how dumb this activity is, it's really only a joke. In my mind, it's quite an achievement. It takes a lot of persistence, too. It took Tim nearly ten years to do it.

Another cool thing about the county hunting sub-culture is the camaraderie amongst the county hunters. It's the nature of the beast that you'll be contacting many of them multiple times, and it's inevitable that you'll make friends with many of them.

As we were leaving, Tim said, "My wife asked me the other day if I could get now get rid of all my radios since I've talked to everybody." She obviously doesn't understand this ham radio sub-culture. Tim's only just begun.

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You can keep up with all of Dan's dumb ham radio activities by reading his blog at www.kb6nu.com. When Dan's not doing dumb ham radio things, he programs websites and does community-service type stuff as a member of the Ann Arbor (MI, USA) Rotary Club. You can email him at cwgeek@kb6nu.com.

# First 2200 Meter VE-JA QSO Claimed

**From the ARRL Letter, September 30, 2010**

Scott Tilley, VE7TIL, provided this report to the ARRL.

Kunikazu Togashi, JA7NI, in Daisen, Akita, Japan, and Scott Tilley, VE7TIL, of Vancouver, British Columbia, completed a transpacific QSO on 2200 m (137 kHz) on September 28, a first between Canada and Japan. The distance between CN89dk (TIL) and QM09fl (NI) is 7162 km. While not the DX record for 2200 m, it comes in second to the distance achieved by ZM2E and UA0LE in 2004.

Things started off with a surprise as NI copied TIL's beacon signal 30 minutes before his sunset, something that had never happened during previous tests. What followed was a "quick" exchange of calls and NI's report was received by TIL. Then a very long and deep fade occurred. This happened before to us and we lost each other and an entire night's sleep!

But that taught us a lesson and we adapted to the deep fading on this path by creating new QSO procedures to

deal with the long times it takes to send information and the deep QSB. NI waited patiently, not knowing TIL had copied the calls and his report.

Our procedure was for him to simply wait until he copied something and respond accordingly... Three hours later RO appeared on NI's screen and during one of my crawls out of the operator's bunk to check the waterfall I saw a dot during a pause in transmission and stopped the transmitter. A few minutes later there was an R and TU but not in DFCW but rather QRSS, as a malfunction at NI's end had him scrambling to send QRSS30 by hand, a true test of a CW operator's skill! He recovered with grace and the QSO was in the bag!

The mode used was dual frequency CW, a form of very slow frequency shift keying that offers a significant time advantage over standard slow Morse code (QRSS). DFCW is read directly off a computer display using software such ARGO by Alberto, I2PHD. The dot lengths used ranged from 30 to 60 seconds.

This QSO caps off months of work by both operators in improving their stations and beacon testing on the path to learn its characteristics.

What is clear to me is the transpacific path on 2200 m is a very viable communication path for amateur experimentation. I'm sure time will demonstrate this further as procedures and equipment improve on both sides of the ocean and the QSO count starts to rise and the time to complete drops.

Further information about the QSO and other LF tests by the operators can be viewed at

http://www3.telus.net/sthed/argo/

and

http://ja7ni.web.fc2.com/

# Pakistani Amateurs Provide Communications, Relief Support for Flood Victims

**From the ARES E-Letter, September 8, 2010**

According to the Pakistan Amateur Radio Society (PARS) -- that country's IARU Member-Society -- radio amateurs in Pakistan have teamed up with the Islamabad Jeep Club (IJC) and Pakistan Academy of Family Physicians (PAFP) to provide relief activities in those areas of Pakistan devastated by floods. The groups will supply food, tents and medical support to the northern flood affected areas of Nowshera, Charsadda and central Sargodha districts. "The cellular services are down and so is the landline," the PARS Web site reports. "Last week, the joint team carried out a survey in the north and the center of the country, and to its dismay, the situation isn't promising. Restoration of cellular services and landlines could take months."

PARS already has a 2 meter repeater in these places and say a "weak signal can be heard in these areas, but [they] would need cross-band repeaters to further increase its strength and allow penetration into the remote areas. This would result in effective communication through handheld [transceivers], rather than relying on base stations where there is an issue with electricity."

PARS has set aside the following frequencies for relief efforts: 145.700 MHz (receive 145.400 MHz, transmit 144.200 MHZ, CTCSS 88.5 MHz), 7.070 MHz, 14.200 MHZ and 14.300 MHz, 435.050 MHz (CTCSS 88.55 MHz)

In order to address the communication breakdown, PARS and the IJC created two teams: one for the northern cities, linking Islamabad with Peshawar, Nowshera and Charsadda, and the other to link cities in the center of the country, including Sargodha, Lahore, Faisalabad and Multan.

In the past few weeks, monsoon rains have deluged Pakistan, followed by disastrous floods that PARS said "were never seen in the last eight decades in some regions. These floods have impacted millions of Pakistanis who need help from the international community with providing food, clean drinking water, shelter and medical aid." In the second week of the disaster, floods are spreading to the Punjab, Sindh and Balochistan Provinces, as well as the Kashmir region where thousands of villages have been destroyed and the situation is worsening.

PARS members, in partnership the IJC, has initiated a relief mission to help the suffering population, and are raising funds to provide essential relief supplies to the families affected by these floods. Until now, more than 1500 people have lost their lives, thousands of villages and towns are destroyed and more than 4.5 million people are left homeless or displaced in the Khyber Pakhtunkhwa Province in the northwest region of the country. PARS reports that due to "large scale destruction of roads and bridges, relief agencies are finding it difficult to reach the areas where people are still stranded. Once communication with those areas is established, authorities are expecting [to find] a high

number of fatalities."

# Radio-Activity

**By Don Russell, W8PEN**

**Red Cross Disaster Drill**

The Knox County ARES had a good turn out for the Red Cross Simulated Emergency, which was held on September 18th. I personally came away realizing that my performance was not necessarily a best effort.

For example, there were two separate simulations. One was run with one set of Red Cross directors, and the other with another set. During the first test, I was out in the registration area keeping an eye on one particularly distraught women (she was a really good actress!). Net Control KD8EVR apparently gave me several calls to update another situation. I missed the calls because my mind was drifting a bit (the "old age drift"?) KD8HSA had to come out and wake me up……. Errrr, alert me to listen for Net Control. It wasn't that I was bored. Just the opposite. I was so involved in watching this distraught women play her part that I was ignoring the radio. One needs to remember his/her duties when involved in this sort of thing.

The other, and somewhat rude, awakening was when KD8EVR assigned me as net control for the follow up drill. Now, I have been one of the Net Control Stations for our Sunday Night ARES NET for some time now. This is why the rude awakening hurts so much. Well, let me tell you: Nothing prepares you for the hectic world of an NCS during realistic simulated tests! I think the real thing would have been easier to cope with! For one thing, A lot happened in that hour and a half. Of course, situations were being crammed into a limited amount of time so it is understandable. And one must realize that during the initial hours of a true disaster, things are going to be pretty intense. So, perhaps this simulation was pretty realistic after all. I came away feeling that everyone should give Net Control a try during a simulation. Never know when you are going to be forced into action by the real thing.

From this experience, I feel it is imperative that an NCS has two hams assigned to it during tests and true emergencies. One to handle the paper work and one to do the communicating. Besides, during an extended exercise or a true emergency, it would be wise change operators routinely to keep a fresh mind at the helm.

I gave myself a performance grade of 2 out a possible 5. I should'a, could'a done better!

**2-Meter Repeater**

Good news. Work on the water tower has been completed. Our 2 meter repeater is back up and running and better than ever. Arlin, KD8EVR, and I could not get together, so the repeater improvements have not happened yet. In fact, I am not so sure they will happen now. Arlin's antenna crew replaced the cable between the antenna and the hard line coming down the tower. The repeater seems to be playing a lot better. We have had some mysterious symptoms lately that no one could figure out and they were too sporadic to nail down. I guess one should consider replacing cables or connectors once ever 10 or 15 years. We all know the term: "If it is not broke, don't fix it". We are going to let things ride and see how the repeater performs for the next few weeks.

The thought of putting the receiving preamp back on the repeater has been reconsidered. We are not going to do it. The feeling is that the repeater receiver is very hot as it is and adding the receiving preamp would actually degrade the system. The power amplifier however, is still being considered.

**440 Repeater Echolink**

Due in part to laziness on my part, the KD8EVR repeaters echolink is not yet up and running. There is a bit more work to do as far as programming the echolink commands to duplicate how it was performing before being taken off the air. I promise I will get to it.

**The Making of Antennas**

Many issues back I started some el-cheapo antenna projects. I felt some of the newer hams needed to realize that it is not necessary to go out and buy a commercial antenna to get started. In fact, many hams never buy a commercial antenna.

I was using coat hanger wires as the elements for these cheap antennas. I also recommended using cooper welding rods as antenna elements. Well, during my last garage clean out, I put my antenna made from cooper welding rod outside. It sat out there all summer long and is now rusted pretty badly. I will have to redo it sometime.

I think where I went wrong is that I did not weather proof the antenna. All articles I have ever read using these material always recommended weather proofing them after tune up.

I think the coat hanger wire is okay because it had a coating on it anyway. But the bare cooper needs protected. I have decided that the next project will use #12 or #10 insulated wire. The larger wire would be used for 2 meter antennas and the smaller for UHF antennas. Wouldn't we all like to have a source of

aluminum stock rod for antenna building. That is fairly expensive though.

I will let readers know how insulated wire works for beam type antennas.

# Pictures Say Many Words

Here are some pictures of the repeater being put back in service. Pictures are compliments of Ann Bradford, KD8LFH

**From the basement of W8PEN**
**From left to right: K8DEVR, W8PEN, KD8LPP**


**Repeater ready for transport with body guard,**
**Brandon Hunt, KD8LPP**

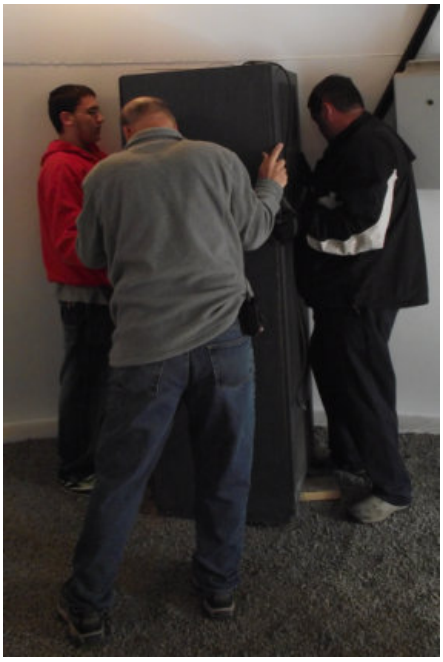
**The antenna is on top!**

**Our antenna is the big one!**

**Into the Dungeon**

**There we go (KD8EVR)**

**Done! Up and Running**
**(KD8EVR, KD8LPP, W8PEN)**



**Make it level!**
**(KD8LPP, W8PEN, KD8EVR)**

**The KD8EVR REPEATER**
**442.100 Mhz**

**KD8EVR/R Tower**

# SPECIAL CLUB MEETING AND COOKOUT

## Mt. Vernon Amateur Radio Club

**Time: 6:00 PM**

**Place: Bennett Park located on the West side of Apple Valley**
**1720 Apple Valley Drive**
**Howard, OH**

**We are having a cookout for our club meeting! This meeting will be held at Bennett Park in Apple Valley. We ask that everyone bring a covered dish of some sort and your own drink. Meat for the cookout will be provided.**

****Coming from the front entrance of Apple Valley turn left on Apple Valley Drive. Bennett Park is approximately 2.5 miles from the entrance on the right at 1720 Apple Valley Drive. You will see a driveway marked with a sign that reads "Bennett Park."****

**There will be at least one station set up plus our new communications mobile will be on display. See you there!**